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NOTES ON GEOGRAPHIC DISTRIBUTION

First record of *Amapasaurus tetradactylus* Cunha, 1970 (Squamata: Gymnophthalmidae) in French Guiana

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ABSTRACT: Three specimens of *Amapasaurus tetradactylus* Cunha, 1970 were collected during a field survey in the core area of the Amazonian National Park of French Guiana ('Parc Amazonien de Guyane'), in southern French Guiana. This is the first record of the species for this country, extending its distribution 140 km northwards.

Amapasaurus tetradactylus Cunha 1970 is a poorly-known litter-dwelling lizard with a distribution restricted to very few localities in the Brazilian states of Amapá and Pará (Cunha 1970; Lima 2008; Avila-Pires *et al*. 2010). Since its description in 1970 in the upper Rio Maracá (Amapá State) (Cunha 1970), it has only been found in the Reserva de Desenvolvimento Sustentável Rio Iratapuru in 2004 (Lima 2008), in 2006 during Rapid Biological Inventories in the Tumucumaque Mountains National Park in the northwestern part of Amapá (Lima 2008), and in 2008 in two localities of Pará state (FLOTA Trombetas and the northern section of ESEC Grão-Pará, in the Acarai Mountains) during biological surveys (Avila-Pires *et al*. 2010).

Three additional specimens, one subadult and two pregnant females, were found during recent fieldwork in a remote area of southern French Guiana (Mount Itoupé, south of Sommet Tabulaire mountain, Amazonian National Park of French Guiana) providing new biological and ecological information and extending the known range of the species about 140 km northwards (Figure 1).

Mount Itoupé ('*Mont Itoupé*') is the second highest summit of French Guiana, after Mount Bellevue of the Inini (851 m a.s.l.). Its shape is that of an elongated plateau positioned along a north-south axis, with a roughly 1 km^2 flat summit reaching 830 m a.s.l. The plateau emerges from an imposing mountain range, situated 230 km inland, in the core area of the Amazonian Park of French Guiana. Most of the mountain range (about 45 km^2) exceeds the 500 m isopleth considered as the lower limit of submontane forests as defined by de Granville (1994). From a climatic point of view, Mount Itoupé lies roughly under the 2250 mm isohyet (annual average 1971-2000; Météo-France Cayenne *in* Barret 2008), but the rugged topography and high elevation undoubtedly affect the local climate by holding back the clouds. The topography and orientation probably induce higher rainfall than what the data provided by Météo-France Cayenne (Barret 2008) suggest, and also contribute to maintaining a persistent fog that keeps the mountain under extremely high levels of air moisture in all seasons, in particular on its eastern slope, which faces the prevailing winds.

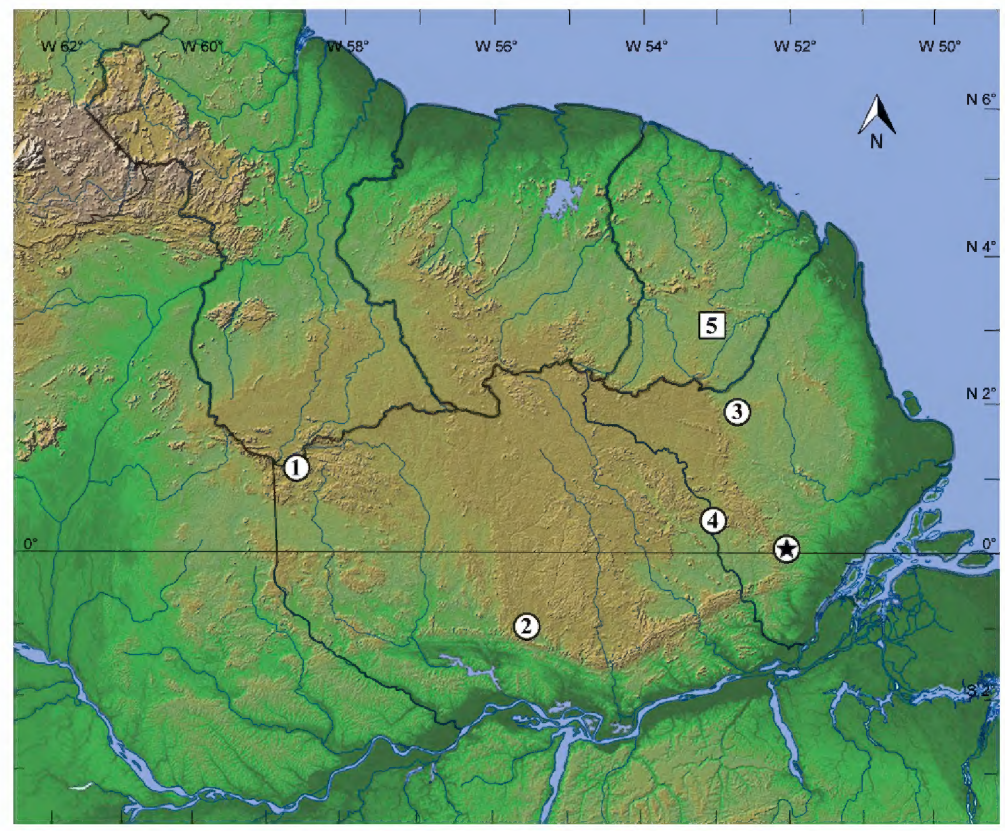

FIGURE 1. Range extension of *Amapasaurus tetradactylus*, a lizard endemic of the Guianan Shield. Star (Type locality): Brasil, Amapá, Igarapé Camaipi, affluent of upper Rio Maracá (Cunha 1970). Dots (Data from litterature): (1) Brasil, Pará, ESEC Grão-Pará North, Acarai Mountains (Avila-Pires et al. 2010); (2) Brasil, Pará, FLOTA Trombetas (Avila-Pires *et al*. 2010); (3) Brasil, Amapá, Tumucumaque Mountains National Park (Lima 2008); (4) Brasil, Amapá, Reserva de Desenvolvimento Sustentável Rio Iratapuru (Lima 2008). Square (This study): (5) French Guiana, Itoupé Mount, "Parc Amazonien de Guyane".

Mount Itoupé is entirely covered by forest, of which three main types can be seen: an irregular high forest with many large emerging trees (up to 60 m tall) on the west-facing slope; an irregular forest mixed with lianas on the east-facing side and an open forest on the summit (Sabatier and Molino, pers. com.). Below 500 m a.s.l., the lowland forest, lying on well-drained slopes, is dominated by large trees from the *Burseraceae* family and by *Xylopia sp.*

(*Annonaceae*), a species still unknown from French Guiana (Sabatier pers. com.). Above 500 m a.s.l., the submontane forest is dominated by *Mimosaceae* and *Lecythidaceae* families on the slopes. The plateau forest (800 m a.s.l.) is characterized by a low forest (20-30 m) dominated by *Mimosaceae* and *Lauraceae* (Brunaux and Guitet, pers. com.) with many tree gaps and a large proportion of trees belonging to typical heliophilous species usually frequent in disturbed habitats at lower altitude (Sabatier and Molino, pers. com.).

A herpetological survey was carried out during the rainy season, from March 18, 2010 to April 01, 2010, exclusively on the western slope and on the plateau of Mount Itoupé. The base camp and helicopter drop zone were set up at 585 m a.s.l. (03°01'39" N, 53°04'39" W). Four transects previously opened by the Amazonian Park of French Guiana team allowed us to explore an elevational gradient ranging from 350 m to 830 m.

As it moves in the leaf litter, *Amapasaurus tetradactylus* is quite similar in habits to *Leposoma guianense*, a very abundant *Gymnophthalmidae* in French Guiana. It could have gone unnoticed had not the team of entomologists kindly harvested a specimen for us. A rapid examination of the lizard immediately revealed morphological differences with *Leposoma guianense* and other sympatric lizards. The main diagnostic features are a bright yellow belly, four digits on fore limbs and a rough head scalation. These criteria are useful to quickly distinguish *Amapasaurus* from other syntopic litter-dwelling lizards in French Guiana (Figure 2). In the field, the criteria were thus compared with the description provided by Avila-Pires (1995) and the original description (Cunha, 1970). This finding led us to give more attention to small litter-dwelling lizards, and enabled us to capture two additional specimens.

Figure 2. Adult female *Amapasaurus tetradactylus* from Mount Itoupé (03°01'39"N, 53°04'39"W). Note the yellow belly with two conspicuous eggs and the characteristic four digits. Photographs by Maël Dewynter.

In total, two adult gravid females (SVL = 20 mm and tail = 37 mm / SVL = 30 mm and tail = 43 mm) and one juvenile were collected by day. Both females laid two eggs (0,65 x 0,40 mm) during the next few days. Tissue samples for genetic analyses were collected in order to clarify the phylogenetic position of this enigmatic species exhibiting a singular morphology.

The specimens were collected under Amazonian National Park permits CS (n°02-10). The adult females are deposited in the herpetological collection of the Muséum National d'Histoire Naturelle (MNHN) in Paris, France, under voucher numbers MNHN 2012.0213 and MNHN 2012.0214.

Mount Itoupé is the sixth known locality for *Amapasaurus tetradactylus*. Our data extends the distribution of this lizard from the Brazilian states of Amapá and Pará to southern parts of French Guiana. In the state of current knowledge, *Amapasaurus tetradactylus* remains an endemic species from the north-eastern parts of the Guianan shield.

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